

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

July 21, 2020

Axel Bolte
President and Chief Executive Officer
Inozyme Pharma, Inc.
321 Summer Street
Suite 400
Boston, Massachusetts 02210

Re: Inozyme Pharma, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed July 20, 2020
File No. 333-239648

Dear Mr. Bolte:

We have reviewed your amended registration statement and have the following comment. Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this comment, we may have additional comments.

Registration Statement on Form S-1, as amended July 20, 2020

Summary Consoldiated Financial Data, page 10

1. Please expand your disclosure within footnote (1) to your pro forma balance sheet data and elsewhere throughout the filing where you discuss the July 2020 issuance of Series A-2 Convertible Preferred Stock in connection with the purchase of intellectual property assets from Alexion Pharmaceuticals, Inc. to disclose the deemed per share fair value of the Series A-2 Convertible Preferred Stock as well as the total amount of the expense you will recognize as of the acquisition date.

Axel Bolte Inozyme Pharma, Inc. July 21, 2020 Page 2

You may contact Gary Newberry at (202) 551-3761 or Jeanne Baker at (202) 551-3691 if you have questions regarding the above comment on the financial statements and related matters. Please contact Abby Adams at (202) 551-6902 or Tim Buchmiller at (202) 551-3635 with any other questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Brian A. Johnson, Esq.